California Department of Transportation
Forest Glen Maintenance Station
Highway 36
Forest Glen, Trinity County

Notice of Proposed No Further Action related to petroleum discharges.
Comment Period ends May 4, 2003.

Site History: The Forest Glen Maintenance Station is a 6.5 acre site located on Highway 36, at Post Mile 18.1, approximately 11 miles east of the intersection of State Highways 3 and 36, in Forest Glen, California. The site is a vacant Caltrans maintenance station and equipment storage yard. The southern portion of the property gently slopes to the west. The northern portion is relatively steep in topography and inaccessible to vehicles.

In October 1991, two 4,000-gallon gasoline fiberglass underground storage tanks were removed from the site. During tank removal, four confirmation soil samples were collected from the native soil at 12 feet below grade, approximately 1 foot below the tank inverts. Total petroleum hydrocarbons as diesel (TPHd) at concentrations of up to 76 ppm was detected in two of the four samples.

Sensitive Receptor Survey: According to the California Department of Water Resources and the Department of Health Services, Division of Drinking Water, there are no known water wells within one mile of the site. The south fork of the Trinity River is approximately 300 feet south of the site.

Excavation and Subsurface Investigation: In May 1992, approximately 3,900 cubic yards of soil was excavated in the former tank field, which included the former fuel island and the area of the two former underground storage tank sites (USTs). Analysis of seven groundwater samples collected from the excavation did not detect Total Petroleum Hydrocarbons as gasoline (TPHg) or benzene, toluene, ethylbenzene and xylenes (BTEX) above reported detection limits except for one groundwater sample with 0.14 parts per billion (ppb) TPHd.

In April-May, 1994 five groundwater monitoring wells were installed and sampled. The monitoring well locations were:
MW-1 was located at the former USTs site.
MW-2 was located 30 feet northwest of the former USTs site, at the southwest corner of the former fuel island.
MW-3 was located 70 feet northeast of the former USTs site, south of the Electrical Generator Building.
MW-4 was located 70 feet west of the former USTs site.
MW-5 was located 60 feet southwest of the former USTs site.

The groundwater flow direction was southwest, toward Highway 36.

Dissolved-phase hydrocarbons at concentrations of up to 400 ppb TPHg were detected in the groundwater samples collected from MW-3 and MW-5. MW-5 is downgradient from the former UST tank pit. MW-3, upgradient from the former USTs site, was located where underground electrical conduits converged at the Electric Generator Building. These electrical conduits provided a pathway for the contamination to migrate from the former fuel island toward MW-3. MW-4 was located cross gradient to the former USTs. Benzene was detected at 0.6 ppb in the groundwater sample collected from MW-4 and TPHd was detected at 600 ppb in the groundwater sample collected from MW-5. Analysis of the groundwater samples collected from

MW-3 detected chromium, zinc and nickel at up to 230 ppb. Chromium was the only chemical constituent that exceeded the state primary maximum contaminant level (MCL) for drinking water. Since chromium is a mineral component of serpentine, a commonly-occurring local rock that sometimes is mined for chromium, the chromium concentration was attributed to a naturally occurring source.

Closure of Monitoring Wells: In April 1999, the groundwater monitoring wells and an on-site soil stockpile were sampled. The results of the groundwater sample laboratory analyses indicated that concentrations of the target compounds were reported below the laboratory detection limits for each of the groundwater samples. On February 28, 2000, Geocon, Geotechnical and Environmental Consultants, Rancho Cordova, California destroyed and backfilled the five monitoring wells at the site.

Contaminated Soil Stockpile: Soil sample analytical results indicated that TPHd was detected in five of 36 soil samples at concentrations ranging from 6.7 to 23 mg/kg. A representative of the lab indicated that the non-detected TPHd results had variable detection limits ranging from 5.0 to 40 mg/kg due to the presence of motor oil range hydrocarbons in the samples. The samples were subsequently analyzed for TPHmo. Concentrations of TPHmo ranging from 8,3 to 597 mg/kg were reported for 34 of the 36 soil samples. Based on the asphalt noted in the stockpile, heavy range petroleum hydrocarbons reported for the soil samples may have been due to the presence of asphalt.

Off-site Disposal and On-site Aeration of Soil Stockpile: In July 1999, following almost nine years of periodic aeration and application of water and fertilizer, additional samples were collected from the soil stockpile and analyzed. Of 36 soil samples collected, only one sample indicated a TPHmo level exceeding 140 mg/kg.

In April 2001, SHN Consulting Engineers & Geologists, Eureka, California supervised the removal of approximately 1,370 tons (1,140 cubic yards) of soil from the site by Ben's Truck & Equipment Co. The soil was transported to the Bio-Industries treatment, storage and disposal facility in Red Bluff, California. A total of eight confirmation soil samples were collected from the material that was left on-site, approximately 1,500 cubic yards. The concentrations of TPHd and TPHmo were less than the detection limits in seven of the eight samples using the Toxicity Characteristic Leaching Procedure (TCLP) analysis. TPHd and TPHmo were detected in sample FG-05-2.4 at 356 ug/l and 250 ug/l, respectively.

In October 2002, after an additional year of aeration, an investigation was conducted to determine the extent of hydrocarbon degradation at the aeration cell soil area. This investigation included small soil pit excavations at 22 locations in the aeration cell soil area. Twenty-nine soil samples were collected for chemical analysis. Two soil samples per boring were collected for 7 of the 22 borings, one sample just above the Visqueen liner, 0.9 meters below ground surface (bgs) and one sample below the liner, 1.2 meters bgs.

Analytical results indicated that concentrations for TCLP petroleum hydrocarbons as diesel and motor oil were not detected in any of the soil samples above the laboratory analytical method reporting limit of 50 ug/L.

Conclusion: The primary sources, the two underground storage tanks, have been removed from the site. A secondary source, the contaminated soil stockpile, no longer exists at the site.

Results of lab analysis of groundwater samples collected at the site in 1999 indicated concentrations of the target compounds had fallen below the laboratory detection limits. All five monitoring wells were closed in 1999. Off-site disposal of some of the original stockpile and long term aeration of the remaining contaminated soil has eliminated any potential threat to water quality.

Proposed Action: Site is proposed for no further action.

MtBE Status: MtBE has not been detected in any of the monitoring wells during any of the groundwater monitoring events that began in May 1994 and ended in April 1999.

Unless comments are received or new information is presented, Regional Water Board staff, propose to concur with no further action upon conclusion of the 30-day comment period.

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